

## REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

1. Rejection of Claims 26 (mistyped in the Office Action as claim 46), 33, 36, 45, and 46 Under 35 USC §102(b) in view of U.S. Patent No. 5,734,962 (Hladlik)

These rejections are respectfully traversed on the grounds that the Hladlik patent fails to disclose or suggest the claimed combination of:

- an antenna providing nearly hemispherical coverage (Hladlik discloses a dish antenna, which provides less than 45° coverage that is not even close to hemispherical, and which is specifically excluded by the original specification—see, *e.g.*, page 1, lines 19-20: “***without the need for dish antennas***” and page 3, lines 7-12);
- a low noise amplifier and a sync detection/demodulation unit for recovering the timing signal (Hladlik discloses the low noise amplifier, but not a **sync detect and demodulation unit *apart from the demodulator in each of the channel processors***); *and*
- a plurality of receiver channel processors, each including a spread spectrum decoder, demodulator, and error correction decoder (in the claimed invention, the timing signal is recovered by a **sync detection and demodulation unit that is separate from the individual channel processors**, which include a spread spectrum decoder, demodulator, and error correction decoder for recovering baseband signals).

Basically, the claimed invention adds a separate sync recovery unit, the claimed “sync detection and demodulation unit” to the usual channel processors that recovery the baseband signal. This additional demodulator can be used to capture an **additional timing signal** that is added by the uplink processor. The additional timing signal can survive changes in the baseband signal that might otherwise prevent synchronization.

It is respectfully noted, as recited in claim 37, the additional timing signal is a “**CW clock tone**” which is an especially simple and therefore robust timing signal that is, contrary to page

3 of the Official Action, not mentioned in Hladlik (col. 3, lines 19-26, cited by the Examiner, say nothing about a CW clock tone). However, while the CW clock tone is especially advantageous and is not taught by Hladlik, the inclusion of the additional sync detection and demodulation unit makes it possible to use the relatively small hemispherical antenna recited in claim 26 even when some other timing signal is used, so that the invention is not limited to a CW clock tone. The use of a hemispherical antenna makes the claimed receiver suitable for mobile and low cost applications, unlike the dish antenna of the type illustrated in Hladlik, resulting in a substantial advantage over conventional C-band applications that require a dish antenna.

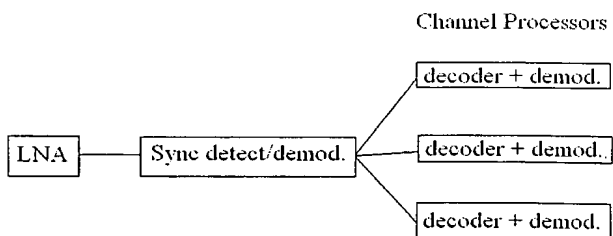
In contrast to the claimed invention, which includes both:

- (I) a sync detection and demodulation unit; and
- (ii) a plurality of receiver channel processors connected to the sync detection and demodulation unit, *each channel processor including a spread spectrum decoder, demodulator, and error detection decoder,*

Hladlik's multiple channel embodiment, shown in Fig. 2, only includes a demodulator 86, which is in each of the receiver channel processors 58. There is **no additional sync detection and demodulation unit**. The demodulator 86 does not correspond to the claimed sync detection and demodulation unit because it is not connected to the plurality of channel processors (each including a demodulator), but rather is included in each of the demodulators. This difference can be understood from the illustration at right, which shows the sync detection and demodulation unit as well as the demodulators in the channel processors.

As illustrated in Fig. 2 of the Hladlik patent, the low noise amplifier 74 is connected to a down converter 76 and splitter 78, none of which includes a sync detection and

### The Claimed Invention



*The Hladlik patent only discloses demodulators in the channel processors (see Fig. 2) and not an additional sync detection and demodulation unit (for recovering an additional timing signal added during uplink*

demodulation unit, as claimed. To the contrary, there is no need in the system of Hladlik for such an additional sync/demodulator because Hladlik does not add a timing signal on uplink (much less a CW clock signal).

Because the Hladlik patent fails to disclose or suggest a satellite receiver that includes a sync/demodulation unit, as recited in claim 26, that is *in addition to* the demodulators in the channel receivers, thereby making possible timing of relatively weak signals (such as C-band signals captured by a hemispherical rather than dish antenna), much less the CW clock tone detector of claim 37, it is respectfully submitted that the Hladlik patent does not anticipate or suggest the claimed invention, and withdrawal of the rejection of claims 26, 33, 36, 37, and 46 is respectfully requested.

2. Rejections of Claims 27-32, 34, 35, 39, 42, 44, and 47 Under 35 USC §103(a) in view of U.S. Patent No. 5,734,962 (Hladlik) and/or U.S. Patent Nos. 4,876,737 (Woodworth), 4,931,802 (Assal), 6,192,068 (Fattouche), 6,198,914 (Saegusa), 4,985,707 (Schmidt) and 6,466,569 (Wright)

These rejections are all respectfully traversed on the grounds that the none of the cited secondary references makes up for the failure of Hladlik patent to disclose or suggest a sync/demodulation unit that is in addition to the demodulation units of the individual channel processors, as claimed, so as to enable use of a hemispherical antenna to capture relatively weak C-band satellite broadcasts (C-Band is recited in independent claims 49 and 50). As a result, withdrawal of the rejections under 35 USC §103(a) is also respectfully requested.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

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Respectfully submitted,

BACON & THOMAS, PLLC

A handwritten signature in black ink, consisting of a stylized 'B' followed by a long horizontal stroke.

By: BENJAMIN E. URCIA  
Registration No. 33,805

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BACON & THOMAS, PLLC  
625 Slaters Lane, 4th Floor  
Alexandria, Virginia 22314

Telephone: (703) 683-0500

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